

Serial No.: 10/597,172

Filing Date: 7/13/2006

Title: MOULDING PROCESS

Attorney Docket No. 156.001US01

REMARKS

Claims 1-9, 12, 14-26, and 44 are pending in this application. Reconsideration of the pending claims is respectfully requested in view of the following remarks.

Rejections Under 35 U.S.C. § 103

Claims 1, 2, 5, 7-9, 14-16, 23, and 24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hammar et al. (U.S. Patent No. 4,786,446) in view of Hisao et al. (Japanese Patent No. 2235729), and further in view of Herbrechtsmeier et al. (WO 98/42497). Applicant respectfully traverses.

Claim 1 recites a method of producing a plurality of soft contact lenses comprising:

A. providing a sheet of solid, substantially dry material;

B. forming said material into a plurality of shaped lens blanks through controlled application of physical force to the material by compression of the material between a *plurality of form or platen pairs arranged in an array to simultaneously press together the material into a plurality of shaped lens blanks* in a process selected from the group consisting of thermoforming, vacuum forming, pressing, hot moulding, cold moulding, and compression moulding; and

C. hydrating said plurality of shaped lens blanks;

wherein at least immediately subsequently to said physical forming step B, said plurality of shaped lens blanks remain at least partially attached to the sheet of material and the sheet is used as a transport medium or carrying mechanism for said plurality of shaped lens blanks.

The Examiner admitted that the combination of Hammar and Hisao does not teach an array of molds. The Examiner cited Herbrechtsmeier '497 for disclosing such features, and argued that it would have been obvious to a person of ordinary skill in the art to modify combination of Hammar and Hisao with the array of molds disclosed in Herbrechtsmeier '497 (*See Office Action, p. 3*). Applicant respectfully disagrees.

Hammar discloses a process in which a polymer precursor is thermoformed into a shaped article and then transformed into a hydrogel lens (*see col. 2, lns. 41-47*). In the

process of Hammar the amount of polymer precursor required to form each lens is introduced into the individual molds and thermoformed to form individual shaped lens articles (*see Example 14*).

Hisao teaches a process in which, rather than introducing the required amount of prepolymer into a mold, a sheet of thermoformable material is pressed between two dies to form shaped lens blanks. Those blanks are subsequently cut from the sheet of material in an edge processing step (*see Figure 7*). As acknowledged by the Examiner, Hisao does not teach an array of platens or molds that produces a plurality of shaped lens blanks. Therefore, Hammar and Hisao do not together provide a process for forming lenses in bulk.

Herbrechtsmeier '497 teaches a process in which liquid prepolymers are dispersed into an array of female mold halves (22), male mold halves (26) are mated with the filled female mold halves to define molding cavities (32), and the prepolymers are mold polymerized to form a plurality of lenses (*see Figs. 2A and 2C, and page 9, 2nd paragraph*). The formed lenses are discrete, individual lenses with defined edges that require no subsequent edge processing.

Herbrechtsmeier '497 teaches that the plurality of lenses should be formed in a manner that avoids any possibility of polymerised material extending beyond the edges of the lens, which could be used to form a plurality of interconnected blanks. On page 14, second paragraph, Herbrechtsmeier '497 describes that the areas beyond the lens cavity are masked to prevent any material being polymerised beyond the mold cavity (*see also page 9, final paragraph*). Furthermore, the molds are held apart to provide an annular gap through which excess prepolymer can escape, therefore there is no prospect of the lenses being formed in an edge-interconnected manner.

Thus, not only does Herbrechtsmeier '497 teach a method in which lenses are not attached to one another, but teaches a process in which the polymerised material is prevented from extending beyond precisely defined edges of the lens. This teaching of Herbrechtsmeier '497 is incompatible with a process in which an array of molds form a plurality of blanks that are attached to one another.

Accordingly, there is no motivation or suggestion to modify the combination of Hammar and Hisao with the array of molds as taught by Herbrechtsmeier '497, as such a modification would defeat the intended purpose of the Hammar/Hisao combination in providing a sheet of formed lens blanks that can be used as a transport mechanism for the lens blanks.

It has been established that a proposed modification of a prior art reference cannot render the prior art reference unsatisfactory for its intended purpose. (MPEP 2143.01(V)). If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *See In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

If the Hammar/Hisao combination were modified to use the array of molds taught by Herbrechtsmeier '497, the modified combination would be rendered unsatisfactory for its intended purpose of providing a sheet of formed lens blanks that can act as a transport mechanism for the lens blanks.

In addition, combining the teachings of Herbrechtsmeier '497 with Hammar/Hisao would not lead the skilled person towards the presently claimed invention, but would instead lead to a thermoforming process in which individual shaped lens blanks are formed with well defined edges. Such a combination would thus fail to meet the limitation in claim 1: "*at least immediately subsequently to said physical forming step B, said plurality of shaped lens blanks remain at least partially attached to the sheet of material and the sheet is used as a transport medium or carrying mechanism for said plurality of shaped lens blanks.*"

In conclusion, there is no teaching in any of the cited references that suggests that a plurality of soft contact lens blanks that are attached to a sheet could be formed together using an array of molds, nor would combining the teachings of the cited references render that subject matter obvious, the combined teaching instead leading to a process where individual lenses are formed in an array of molds.

Accordingly, claim 1 would not have been obvious over the cited references.

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Since claims 2, 5, 7-9, 14-16, 23, and 24 depend from claim 1 and thus include all the limitations of claim 1, these dependent claims would also not have been obvious over the cited references for at least the same reasons as claim 1.

Applicant therefore respectfully requests that the rejection of claims 1, 2, 5, 7-9, 14-16, 23, and 24 under 35 U.S.C. § 103(a) be withdrawn.

Applicant notes that in all of the following claim rejections, which relate to claims that depend from claim 1, the Examiner failed to cite Herbrechtsmeier '497. Accordingly, the references cited below fail to meet all the limitations of the rejected claims as discussed hereafter. Accordingly, any next Office Action should be non-final as the following rejections are improper.

Claims 3 and 4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hammar in view of Hisao, and further in view of Hassan et al., *Water Solubility Characteristics of Poly(Vinyl Alcohol) and Gel Prepared By Freezing/Thawing Processes*, Water Soluble Polymers, Plenum Press, pp. 31-40 (1998). Applicant respectfully traverses.

Claims 3 and 4 depend from claim 1 and thus include all the limitations of claim 1. As discussed previously, claim 1 would not have been obvious over Hammar in view of Hisao. Adding the teachings of Hassan as proposed by the Examiner does not overcome the deficiencies of the other cited references.

As a result, claims 3 and 4 would not have been obvious over the cited references.

Applicant therefore respectfully requests that the rejection of claims 3 and 4 under 35 U.S.C. § 103(a) be withdrawn.

Claim 6 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Hammar in view of Hisao, and further in view of Iwaseya et al. (J MATER SCI 41 (2006) 1979-1982). Applicant respectfully traverses.

Claim 6 depends from claim 1 and thus includes all the limitations of claim 1. As discussed previously, claim 1 would not have been obvious over Hammar in view of Hisao. Adding the teachings of Iwaseya as proposed by the Examiner does not overcome the deficiencies of the other cited references.

As a result, claim 6 would not have been obvious over the cited references.

Applicant therefore respectfully requests that the rejection of claim 6 under 35 U.S.C. § 103(a) be withdrawn.

Claim 12 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Hammar in view of Hisao, and further in view of Miller et al. (U.S. Patent No. 4,652,721). Applicant respectfully traverses.

Claim 12 depends from claim 1 and thus includes all the limitations of claim 1. As discussed previously, claim 1 would not have been obvious over Hammar in view of Hisao. Adding the teachings of Miller as proposed by the Examiner does not overcome the deficiencies of the other cited references.

As a result, claim 12 would not have been obvious over the cited references.

Applicant therefore respectfully requests that the rejection of claim 12 under 35 U.S.C. § 103(a) be withdrawn.

Claims 17 and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hammar in view of Hisao, and further in view of LeVay (U.S. Patent No. 5,166,528). Applicant respectfully traverses.

Claims 17 and 18 depend from claim 1 and thus include all the limitations of claim 1. As discussed previously, claim 1 would not have been obvious over Hammar in view of Hisao. Adding the teachings of LeVay as proposed by the Examiner does not overcome the deficiencies of the other cited references.

Hence, claims 17 and 18 would not have been obvious over the cited references.

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Applicant therefore respectfully requests that the rejection of claims 17 and 18 under 35 U.S.C. § 103(a) be withdrawn.

Claim 19 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Hammar in view of Hisao, and further in view of Voss et al. (U.S. Publication No. 2004/0112008). Applicant respectfully traverses.

Claim 19 depends from claim 1 and thus includes all the limitations of claim 1. As discussed previously, claim 1 would not have been obvious over Hammar in view of Hisao. Adding the teachings of Voss as proposed by the Examiner does not overcome the deficiencies of the other cited references.

As a result, claim 19 would not have been obvious over Hammar in view of Hisao and Voss.

Applicant therefore respectfully requests that the rejection of claim 19 under 35 U.S.C. § 103(a) be withdrawn.

Claims 20 and 21 were rejected under 35 USC § 103(a) as being unpatentable over Hammar in view of Hisao, in view of Voss, and further in view of Jux (U.S. Patent No. 6,474,465). Applicant respectfully traverses.

Claims 20 and 21 depend indirectly from claim 1 through claim 19 and thus include all the limitations of claims 1 and 19. As discussed above, claim 19 would not have been obvious over Hammar in view of Hisao and Voss. Adding the teachings of Jux as proposed by the Examiner does not overcome the deficiencies of the other cited references.

Thus, claims 20 and 21 would not have been obvious over the cited references.

Applicant therefore respectfully requests that the rejection of claims 20 and 21 under 35 U.S.C. § 103(a) be withdrawn.

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Claims 22 and 44 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hammar in view of Hisao, and further in view of Herbrechtsmeier et al. (U.S. Patent No. 6,113,817). Applicant respectfully traverses.

Claims 22 and 44 depend from claim 1 and thus include all the limitations of claim 1. As discussed previously, claim 1 would not have been obvious over Hammar in view of Hisao. Adding the teachings of Herbrechtsmeier '817 as proposed by the Examiner does not overcome the deficiencies of the other cited references.

As a result, claims 22 and 44 would not have been obvious over the cited references.

Applicant therefore respectfully requests that the rejection of claims 22 and 44 under 35 U.S.C. § 103(a) be withdrawn.

Claims 25 and 26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hammar in view of Hisao, and further in view of Biel et al. (U.S. Publication No. 2002/0163638). Applicant respectfully traverses.

Claims 25 and 26 depend from claim 1 and thus include all the limitations of claim 1. As discussed previously, claim 1 would not have been obvious over Hammar in view of Hisao. Adding the teachings of Biel as proposed by the Examiner does not overcome the deficiencies of the other cited references.

Hence, claims 25 and 26 would not have been obvious over the cited references.

Applicant therefore respectfully requests that the rejection of claims 25 and 26 under 35 U.S.C. § 103(a) be withdrawn.

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CONCLUSION

Applicant respectfully submits that the pending claims are in condition for allowance and notification to that effect is earnestly requested. If necessary, please charge any additional fees or credit overpayments to Deposit Account No. 502432.

If the Examiner has any questions or concerns regarding this application, please contact the undersigned at the telephone number listed below.

Respectfully submitted,

Date: January 11, 2012

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